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| EXAMINER | |
|---|---|
| ABDI, AMARA | |
| **ART UNIT** | **PAPER NUMBER** |
| 2609 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/734,613 | LOVE ET AL. | |
| | Examiner | Art Unit | |
| | Amara Abdi | 2609 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-29 and 31-49* is/are rejected.

7)☒ Claim(s) *11 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **in figure 2**, reference number **110**, and **112** were not mentioned in the specifications.

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

**Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The examiner suggests inserting section headers in the appropriate location in the specification.

***Claim Objections***

4. Claims 3,4-6,11,15-16, and 25 are objected to because of the following informalities:

(1) Claim 3, line 3, "**a** group" should be changed to "**the** group";

(2) Claim 4, line 1, "**a** view" should be changed to "**the** view";

(3) Claim 6, line 1, "refining" should be changed to "defining"

(4) Claim 11, line 9, "**a** predetermined" should be changed to "**the** predetermined"; and on the same informality was found on line 11.

(5) Claim 15, line 2, "**a** drawing" should be changed to "**the** drawing";

(6) Claim 25, line 3, "**a** group" should be changed to "**the** group".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 20-26,31-35,40-46, and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto (US PGPUB 2001/0043236).

(1) Regarding claim 20:

Yamamoto discloses the method of coding a view from the 3 dimensional CAD model (paragraph [0012], line 4), the method comprising:

a) deriving a 2-dimensional view from the 3-dimensional CAD model (paragraph [0036], line 2-5);

b) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

c) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; (paragraph [0050], line 1-4)

d) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits)

e) adding the code bits to a view code for the view; (paragraph [0051], line 3-4), (the examiner interpreted the creation of a projection view data as the view code)

f) storing the view code (paragraph [0051], line 4-8), (the examiner interpreted the entering of data to the projection view manager as storing the view code).

(2) Regarding claim 21:

Yamamoto discloses the method, including repeating steps b) to e) for further entities and/or groups of entities in the view (paragraph [0045], line 11-15).

(3) Regarding claim 22:

Yamamoto discloses the method, including steps a) to f) for further views from 3-dimensional CAD model so as to store a plurality of codes of different views (paragraph [0039], line 10-11).

(4) Regarding claim 23:

Yamamoto discloses the method of coding a view in a CAD drawing (paragraph [0012], line 3-4), the method comprising:

a) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

b) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; (paragraph [0050], line 1-4)

c) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits)

d) adding the code bits to a view code for the view; (paragraph [0051], line 3-4), (the examiner interpreted the creation of a projection view data as the view code)

e) storing the view code (paragraph [0051], line 4-8), (the examiner interpreted the entering of data to the projection view manager as storing the view code).

(5) Regarding claim 24:

Yamamoto discloses the method, including repeating steps a) to d) for further entities and/or groups of entities in the view (paragraph [0045], line 11-15).

(6) Regarding claim 25:

Yamamoto disclose the method, where the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are interpreted as geometrics features), entities of a similar type (paragraph [0046], line 13-15), (the similar type is interpreted as similar class) or entities which form the group by virtue of their location (paragraph [0065], line 9-10) or juxtaposition in the view.

(7) Regarding claim 26:

Yamamoto disclose the method, where the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property type (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the examiner interpreted the class as a list where the property data will be written).

(8) Regarding claim 31:

Yamamoto discloses the method, where the view code has a predefined structure of code bits (paragraph [0051], line 1-2), and the drawing has a predetermined

class (paragraph [0044], line 1-3) the code structure being defined differently for drawings having different classes (paragraph [0048], line 1-9), (the examiner interpreted that the code structure being defined based on the classification of graphic elements in groups, so the code structure will be the same for the drawing classified in the same group, and different for the drawing classified into different groups).

(9) Regarding claim 32:

Yamamoto discloses the method, where the step of storing the view code includes encrypting the view code and storing the encrypted view code (paragraph [0071], line 3-5), (the examiner interpreted the word encrypting as encoding, and the view code is interpreted as part of the proposed CAD system).

(10) Regarding claim 33:

Yamamoto discloses the method, where the step of storing comprises storing the encrypted view code in a catalogue, the catalogue being a portion of the database in which a sub-set of drawing is stored (paragraph [0071], line 13-16), (the examiner interpreted the catalogue as local mass storage devices which is a portion of database).

(11) Regarding claim 34:

Yamamoto discloses the method, where the step of storing includes storing encrypted view codes of all views in the drawing (paragraph [0071], line 13-16), (the examiner interpreted that the proposed CAD system comprises all views in the drawing).

(12) Regarding claim 35:

Yamamoto discloses the method, further including storing at least one of an image file of the drawing (paragraph [0039], line 6), (the image fie of the drawing is interpreted as the image data), details of a part or component depicted by the drawing, and other information relating to the drawing (paragraph [0071], line 13-16), (the examiner interpreted that the details of part or components depicted by the drawing, and other in formations related to the drawing are included in the proposed CAD system).

(13) Regarding claim 40:

Yamamoto discloses the method of selecting a CAD drawing for retrieval from a database of drawing (paragraph [0039], line 9-12), the method comprising:

a) producing a CAD source drawing comprising a source view (paragraph [0037], line1-6);

b) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

c) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; (paragraph [0050], line 1-4)

d) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits)

e) adding the code bits to a view code for the view; (paragraph [0051], line 3-4), (the examiner interpreted the creation of a projection view data as the view code)

f) comparing the source view code with each of a plurality of stored view codes and calculating a similarity index for each stored view code of the plurality (paragraph [0045], line 4-15); and

g) selecting the drawing for retrieval from the database (paragraph [0043], line 2-3) on the basis of the similarity index (paragraph [0044], line 3-6), (the examiner interpreted the similarity index as the appropriate class).

(14) Regarding claim 41:

Yamamoto discloses the method, where the step of selecting comprises identifying a most similar view of the plurality of views, the most similar view having the highest similarity index, and selecting the drawing which contains the most similar view (paragraph [0044], line 14-17), (the examiner interpreted the highest similar index by aligning each feature's profile view with that of the class in order to select the drawing, which contains the most similar view).

(15) Regarding claim 42:

Yamamoto discloses the method, where the step of selecting includes the step of displaying a list of drawing for user selection of the drawing (paragraph [0046], line 1-3), the list being ordered according to the similarity indices of views in the drawings (paragraph [0046], line 9-17).

(16) Regarding claim 43:

Yamamoto discloses the method, where the plurality of stored view codes comprises the view codes of views contained in drawing stored in a catalogue, the catalogue being a portion of the database (paragraph [0071], line 13-16), (the examiner

interpreted the catalogue as a local mass storage devices which is a portion of database).

(17) Regarding claim 44:

Yamamoto discloses a drawing retrieval system for a CAD system (paragraph [0011], line 2) comprising means for entering (paragraph [0051], line 6-7) and means for displaying a drawing (paragraph [0046], line 1-3), and a memory for storing data including a database of drawings (paragraph [0047], line 1-3; and paragraph [0071], line 8), the drawing retrieval system comprising:

a) identifying means for identifying a feature of a view in a drawing, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

b) means for extracting properties of the feature, wherein the properties include vector properties associated with the entity or group of entities (paragraph [0050], line 1-4);

c) coding means for generating code bits representative of the extracted properties and for adding the code bits to a view code for the view (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits);

d) means for storing the view code in the memory (paragraph [0047], line 1-3);

e) comparing means for comparing (i) a first view code of a first view in a first drawing entered in the entering means with (ii) a second view code of a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view (paragraph [0045], line 4-15); and

f) means for presenting, on the basis of the similarity index (paragraph [0044], line 3-6), (the examiner interpreted the similarity index as the appropriate class), a list of drawings from which a user can select for retrieval from the database means for retrieving a selected drawing from the database for display on the display means (paragraph [0043], line 2-3).

(18) Regarding claim 45:

A software carrier comprising computer readable instructions for controlling a computer to code a view in a CAD drawing (paragraph [0071], line 1-7), including instructions for:

a) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

b) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 1-4);

c) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits);

d) adding the code bits to a view code for the view (paragraph [0051], line 3-4); and

e) storing the view code (paragraph [0051], line 4-8), (the examiner interpreted the entering of data to the projection view manager as storing the view code).

(19) Regarding claim 46:

A software carrier comprising computer readable instructions for controlling a computer to facilitate selection by a user of a CAD drawing for retrieval from a database of CAD drawings (paragraph [0071], line 1-7), each CAD drawing in the database comprising at least one view (paragraph [0035], line 4-12) that has been coded by:

a) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

b) extracting properties of the feature from the CAD drawing containing the view, wherein the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 1-4);

c) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits); and

d) adding the code bits to a view code for the source view (paragraph [0051], line 3-4);

wherein the computer readable instructions include instructions for (paragraph [0071], line 1-7)

i) producing a CAD source drawing comprising a source view (paragraph [0037], line1-6);

ii) coding the source view in accordance with steps a) to d) above (paragraph [0012], line 14-18); (paragraph [0050], line 1-4); (paragraph [0051], line 1-2); and (paragraph [0051], line 3-4);

iii) comparing the source view code with each of a plurality of stored codes of views in the database of drawings to calculate a similarity index for each stored view code (paragraph [0045], line 4-15); and

iv) on the basis of the similarity index (paragraph [0044], line 3-6), (the examiner interpreted the similarity index as the appropriate class), presenting a list of drawings from which the user can select for retrieval from the database (paragraph [0043], line 2-3).

(20) Regarding claim 49:

A method of producing a model code directly from a 3-dimensional CAD model (paragraph [0037], line 1-2), the method comprising:

a) identifying a feature in the 3-dimensional CAD model comprising a geometrical entity or a group of geometrical entities (paragraph [0036], line 14-18); and (paragraph [0012], line 14-18);

b) extracting properties of the feature from the CAD model, wherein the properties include vector properties associated with the geometrical entity or group of geometrical entities (paragraph [0050], line 1-4);

c) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits);

e) adding the code bits to a model code for the model (paragraph [0051], line 3-4); and

f) storing the model code (paragraph [0051], line 4-8), (the examiner interpreted the entering of data to the projection view manager as storing the view code).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3,7,12-19, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Agnes et al. (US 6,918,095).

(1) Regarding claim 1:

Yamamoto disclose a method of coding a view in a 2-dimensional CAD drawing (paragraph [0002], line 1-5), the method comprising:

b) identifying a view in the drawing for coding (paragraph [0012], line 11-14);

c) identifying a feature of the view, wherein the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18);

d) extracting properties of the feature from the CAD drawing, wherein the properties include vector properties associated with the graphic entity or group of graphic entities; (paragraph [0050], line 1-4)

e) generating code bits representative of the extracted properties (paragraph [0051], line 1-2), (the examiner interpreted the search class as the code bits)

f) adding the code bits to a view code for the view; (paragraph [0051], line 3-4), (the examiner interpreted the creation of a projection view data as the view code)

g) storing the view code (paragraph [0051], line 4-8), (the examiner interpreted the entering of data to the projection view manager as storing the view code)

However, Yamamoto does not disclose the method comprising a filter, for filtering the drawing to temporarily remove extraneous material therefrom as recited in claim 1, a).

Agnes et al. teaches a dimension generation filter and analysis, where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18).

One of ordinary skill in the art would have clearly recognized, the filtering of the drawing to temporarily remove extraneous material therefrom (column 4, line 17-24). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where filtering the drawing to remove certain items, in the system of Yamamoto, because in such feature a user can be provided with an option to choose an automatic mode of operation, where the computer system completes the transfer of all dimension and other constraints before allowing the user to start reworking the plan, and semi-automatic mode of operation, where a user may interrupt the transfer process and rework data that has been transferred up to the point of interruption (column 1, line 55-62).

(2) Regarding claim 2:

Yamamoto further disclose the method, including repeating steps c) to f) for further entities and/or groups of entities in the view (paragraph [0045], line 11-15).

(3) Regarding claim 3:

Yamamoto further disclose the method, where the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are interpreted as geometrics features), entities of a similar type (paragraph [0046], line 13-15), (the similar type is interpreted as similar class) or entities which form the group by virtue of their location (paragraph [0065], line 9-10) or juxtaposition in the view.

(4) Regarding claim 7:

Yamamoto further disclose the method, where the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property type (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the examiner interpreted the class as a list where the property data will be written).

(5) Regarding claim 12:

Yamamoto further discloses the method, where the view code has a predefined structure of code bits (paragraph [0051], line 1-2), and the drawing has a predetermined class (paragraph [0044], line 1-3) the code structure being defined differently for drawings having different classes (paragraph [0048], line 1-9), (the examiner interpreted that the code structure being defined based on the classification of graphic elements in

groups, so the code structure will be the same for the drawing classified in the same group, and different for the drawing classified into different groups).

(6) Regarding claim 13:

Yamamoto further discloses the method, where the step of storing the view code includes encrypting the view code and storing the encrypted view code (paragraph [0071], line 3-5), (the examiner interpreted the word encrypting as encoding, and the view code is interpreted as part of the proposed CAD system).

(7) Regarding claim 14:

Yamamoto further discloses the method, where the step of storing comprises storing the encrypted view code in a catalogue, the catalogue being a portion of the database in which a sub-set of drawing is stored (paragraph [0071], line 13-16), (the examiner interpreted the catalogue as local mass storage devices which is a portion of database).

(8) Regarding claim 15:

Yamamoto further discloses the method, where the step of storing includes storing encrypted view codes of all views in the drawing (paragraph [0071], line 13-16), (the examiner interpreted that the proposed CAD system comprises all views in the drawing).

(9) Regarding claim 16:

Yamamoto further discloses the method, further including storing at least one of an image file of the drawing (paragraph [0039], line 6), (the image fie of the drawing is interpreted as the image data), details of a part or component depicted by the drawing,

and other information relating to the drawing (paragraph [0071], line 13-16), (the examiner interpreted that the details of part or components depicted by the drawing, and other in formations related to the drawing are included in the proposed CAD system).

(10) Regarding claim 17:

Yamamoto discloses all the subject matter as described in claim 1 above.

However, Yamamoto does not disclose the method, where the step of filtering the drawing includes temporarily removing a frame/border of the drawing as recited in claim 17.

Agnes et al. teaches a dimension generation filter and analysis, where the filtering steps includes the removing of the frame/border of the drawing (column 2, line 37-40), (the examiner interpreted that the deleting of the drawing data includes the frame of the drawing).

One of ordinary skill in the art would have clearly recognized the filtering of the drawing by removing the unwanted dimension from all views of drawing (column 5, line 15-21). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where removing the unwanted dimension by the filtering of the drawing, in the system of Yamamoto, because in such feature, the dimension generation can be reworked to modify drawing data or delete the drawing data. Deletion can be implemented such that the deleted data is removed from subsequent views of the object changes or modification to drawing data can be stored

and reproduced in subsequent formed tow dimension views (column 2, line 38-40, and line 44-46).

(11) Regarding claim 18:

Yamamoto discloses all the subject matter as described in claim 1 above.

Furthermore, Yamamoto discloses the method, where identifying lines entities which make up the frame/border (paragraph [0044], line 14-17), (the examiner interpreted the feature's profile view comprises the frame/border);

identifying the boundary of the frame/border line entities (paragraph 0065], line 5-8), (the examiner interpreted the boundary as window or surface); and

deleting all graphic entities outside the boundary (paragraph [0041], line 16-18), (the examiner interpreted that by applying the threshold, it limits the number of detailed features to be included in the projection view, therefore deleting all the graphic entities outside the boundary).

However, Yamamoto does not disclose the method, where the frame/border is temporarily removed as recited in claim 18.

Agnes et al. teaches a dimension generation filter and analysis, where the frame/border is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

One ordinary skill in the art would have clearly recognized the removing of frame/border by filtering the unwanted dimension from all views of drawing (column 5, line 19-20). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where removing the unwanted dimension

by the filtering of the drawing, in the system of Yamamoto, because in such feature, the dimension generation can be reworked to modify drawing data or delete the drawing data. Deletion can be implemented such that the deleted data is removed from subsequent views of the object changes or modification to drawing data can be stored and reproduced in subsequent formed tow dimension views (column 2, line 38-40, and line 44-46).

(12) Regarding claim 19:

Yamamoto discloses all the subject matter as described in claims 1, 17, and 18 above.

Furthermore, Yamamoto discloses the removing of other entities including lines of prescribed type (paragraph [0068], line 1-2).

However, Yamamoto does not disclose the filtering process as recited in Claim 19.

Agnes et al. teaches a dimension generation filter and analysis, where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18).

One of ordinary skill in the art would have clearly recognized, the filtering of the drawing to temporarily remove extraneous material therefrom (column 4, line 17-24). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where filtering the drawing to remove certain items, in the system of Yamamoto, because in such feature a user can be provided with an option to choose an automatic mode of operation, where the computer system

completes the transfer of all dimension and other constraints before allowing the user to start reworking the plan, and semi-automatic mode of operation, where a user may interrupt the transfer process and rework data that has been transferred up to the point of interruption (column 1, line 55-62).

(13) Regarding claim 36:

Yamamoto discloses all the subject matter as described in claim 23 above.

However, Yamamoto does not disclose the filtering process prior to extracting the vector properties to remove extraneous material from the drawing as recited in claim 36.

Agnes et al. teaches a dimension generation filter and analysis, where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18).

One of ordinary skill in the art would have clearly recognized, the filtering of the drawing to temporarily remove extraneous material therefrom (column 4, line 17-24). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where filtering the drawing to remove certain items, in the system of Yamamoto, because in such feature a user can be provided with an option to choose an automatic mode of operation, where the computer system completes the transfer of all dimension and other constraints before allowing the user to start reworking the plan, and semi-automatic mode of operation, where a user may interrupt the transfer process and rework data that has been transferred up to the point of interruption (column 1, line 55-62).

(25) Regarding claim 37:

Yamamoto discloses all the subject matter as described in claims 23 and 36 above.

However, Yamamoto does not disclose the method, where the step of filtering the drawing includes temporarily removing a frame/border of the drawing as recited in claim 37.

Agnes et al. teaches a dimension generation filter and analysis, where the filtering steps includes the removing of the frame/border of the drawing (column 2, line 37-40), (the examiner interpreted that the deleting of the drawing data includes the frame of the drawing).

One of ordinary skill in the art would have clearly recognized the filtering of the drawing by removing the unwanted dimension from all views of drawing (column 5, line 15-21). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where removing the unwanted dimension by the filtering of the drawing, in the system of Yamamoto, because in such feature, the dimension generation can be reworked to modify drawing data or delete the drawing data. Deletion can be implemented such that the deleted data is removed from subsequent views of the object changes or modification to drawing data can be stored and reproduced in subsequent formed tow dimension views (column 2, line 38-40, and line 44-46).

(14) Regarding claim 38:

Yamamoto discloses all the subject matter as described in claims 23,36, and 37 above.

Furthermore, Yamamoto discloses the method, where identifying lines entities which make up the frame/border (paragraph [0044], line 14-17), (the examiner interpreted the feature's profile view comprises the frame/border);

identifying the boundary of the frame/border line entities (paragraph 0065], line 5-8), (the examiner interpreted the boundary as window or surface); and

deleting all graphic entities outside the boundary (paragraph [0041], line 16-18), (the examiner interpreted that by applying the threshold, it limits the number of detailed features to be included in the projection view, therefore deleting all the graphic entities outside the boundary).

However, Yamamoto does not disclose the method, where the frame/border is temporarily removed as recited in claim 38.

Agnes et al. teaches a dimension generation filter and analysis, where the frame/border is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

One ordinary skill in the art would have clearly recognized the removing of frame/border by filtering the unwanted dimension from all views of drawing (column 5, line 19-20). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where removing the unwanted dimension by the filtering of the drawing, in the system of Yamamoto, because in such feature, the

dimension generation can be reworked to modify drawing data or delete the drawing data. Deletion can be implemented such that the deleted data is removed from subsequent views of the object changes or modification to drawing data can be stored and reproduced in subsequent formed tow dimension views (column 2, line 38-40, and line 44-46).

(15) Regarding claim 39:

Yamamoto discloses all the subject matter as described in claims 23,36, and 37 above.

Furthermore, Yamamoto discloses the removing of other entities including lines of prescribed type (paragraph [0068], line 1-2).

However, Yamamoto does not disclose the filtering process as recited in Claim 39.

Agnes et al. teaches a dimension generation filter and analysis, where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18).

One of ordinary skill in the art would have clearly recognized, the filtering of the drawing to temporarily remove extraneous material therefrom (column 4, line 17-24). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Agnes et al., where filtering the drawing to remove certain items, in the system of Yamamoto, because in such feature a user can be provided with an option to choose an automatic mode of operation, where the computer system completes the transfer of all dimension and other constraints before allowing the user to

start reworking the plan, and semi-automatic mode of operation, where a user may interrupt the transfer process and rework data that has been transferred up to the point of interruption (column 1, line 55-62).

9. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Agnes et al. as applied to claim 1 above, and further in view Talley et al. (US 6,918,092).

(1) Regarding claim 4:

Yamamoto discloses all the subject matter as described in claim 1 above.

However, Yamamoto does not disclose the method, where the step of identifying a view comprises defining a boundary enclosing an area, which includes the graphic entities in the drawing as recited in claim 4.

Talley et al. teaches a graphical list grouping widget and method of use thereof, where defining a boundary enclosing an area, which includes the graphic entities in the drawing (column 3, line 28-42)

One of ordinary skill in the art would have clearly recognized the defining of boundary enclosing an area, which includes the graphic entities in the drawing (column 4, line 44-48). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Talley et al., where the boundary is defined, in the system of Yamamoto, because such feature provides the segmenting of sets of distinct entities into groups with associated boundaries each having an associated logic (column 2, line 10-13).

(2). Regarding claim 6:

Yamamoto further disclose the method including the step of defining the view to be coded by removing all views having less than a predetermined number of entities and passing for coding views having greater than or equal to the predetermined number of entities (paragraph [0041], line 16-18), (the examiner interpreted that the view to be coded is defined by conducting a threshold for the features to be included in the projection view).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al. and Talley et al. as applied to claims 1 and 4 above, and further in view of Takahashi et al. (US 6,256,417).

Yamamoto, Agnes et al. and Talley et al. disclose all the subject matter as described in claims 1, and 4 above.

However, Yamamoto, Agnes et al. and Talley et al. do not disclose that boundary is a bounding rectangle, and splitting the bounding rectangle to define a plurality of view rectangles as recited in claim 5.

Takahashi et al. teaches an image coding method, where the boundary is rectangle (column 5, line 6), where dividing the bounding rectangle to define a plurality of view rectangles (column 4, line 66-67; and column 5, line 1-2)

One of ordinary skill in the art would have clearly recognized that boundary is bounding rectangle (column 5, line 6), where splitting the bounding rectangle to define a plurality of view rectangles (column 5, line 3-5). Therefore it would have been obvious to

one of ordinary skill in the art at the time of invention to combine the system of Takahashi et al., where the boundary is rectangle bounding, in the system of Yamamoto, because such feature provides an image coding method that can avoid a reduction in coding efficiency due to influence of pixel values of insignificant pixels, which improve the coding efficiency (column 2, line 57-60).

11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, and Agnes et al. as applied to claims 1 and 7 above, and further in view of Ajima et al. (US 5,390,199).

(1) Regarding claim 8:

Yamamoto and Agnes et al. disclose all the subject matter as described in claims 1, 7, and 23 above.

However, Yamamoto and Agnes et al. do not disclose the method, where setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data as recited in claims 8 and 27.

Ajima et al. teaches an advanced code error detection apparatus and system, where setting type code bits corresponding to the property type (column 6, line 33), (the examiner interpreted the first state as the type code bits), and setting data code bits corresponding to each item of property data (column 6, line 35-40)

One of ordinary skill in the art would have clearly recognized the setting of type code bits corresponding to the property type, and setting data bits corresponding to each item of property data (column 6, line 33-40). Therefore it would have been obvious

to one of ordinary skill in the art at the time of invention to combine the system of Ajima et al., where setting the type code bits, and data code bits, in the system of Yamamoto, because such feature can start bit error detection from the desired time point, so reliably detect bit error in bit data including the bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

(2) Regarding claim 9:

Yamamoto and Agnes et al. disclose all the subject matter as described in claims 1,7, 8, and 23 above.

However, Yamamoto and Agnes et al. do not disclose the method where comparing each property data item with a predetermined sub-set of data associated as recited in claims 9 and 28.

Ajima et al. teaches an advanced code error detection apparatus and system, where comparing bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45)

One of ordinary skill in the art would have clearly recognized the comparing of each property data item with a predetermined sub-set of data associated (column 6, line 41-45). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Ajima et al., where each property data is compared with data associated with given code bit, in the system of Yamamoto, because such feature can start bit error detection from the desired time point, so reliably detect bit error in bit data including the bit data of a reception code input before the

establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., and Ajima et al. as applied to claims 1,7,8,9,23,27, and 28 above, and further in view Bloomfield et al. (US PGPUB 2001/0036322).

Yamamoto, Agnes et al., and Ajima et al. disclose all the subject matter as described in claims 1,7,8,9, and 23 above.

However, Yamamoto, Agnes et al., and Ajima et al. do not disclose the method, where each code bit has an associate attribute, and comparing the property data item with the predetermined sub-set of data associated with the code bit as recited in claims 10 and 29.

Bloomfield et al. teaches an image processing system using an array processor, where each code bit has an associate attribute (paragraph [0053], line 1-3), and comparing the property data item with the predetermined sub-set of data associated with the code bit (paragraph [0045], line 9-12).

One of ordinary skill in the art would have clearly recognized the method, where each code bit has an associated attribute (paragraph [0053], line 3-7), and comparing the property data item with the predetermined sub-set of data associated with the code bit (paragraph [0051], line 8-10). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Bloomfield et al., where each code bit has an associated attribute, in the system of Yamamoto,

because such feature has an advantage of scalability, ease of programming, deterministic high speed processing, high throughput, controllability, and extensibility (paragraph [0023], line 9-11), and each acquisition processing component includes a high performance processor for embedded control to enable standalone and real-time application (paragraph [0021], line 5-7).

13. Claims 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Ajima et al. (US 5,390,199).

(1) Regarding claim 27:

Yamamoto discloses all the subject matter as described in claims 1, 7, and 23 above.

However, Yamamoto does not disclose the method, where setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data as recited in claims 8 and 27.

Ajima et al. teaches an advanced code error detection apparatus and system, where setting type code bits corresponding to the property type (column 6, line 33), (the examiner interpreted the first state as the type code bits), and setting data code bits corresponding to each item of property data (column 6, line 35-40)

One of ordinary skill in the art would have clearly recognized the setting of type code bits corresponding to the property type, and setting data bits corresponding to each item of property data (column 6, line 33-40). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Ajima

et al., where setting the type code bits, and data code bits, in the system of Yamamoto, because such feature can start bit error detection from the desired time point, so reliably detect bit error in bit data including the bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

(2) Regarding claim 28:

Yamamoto discloses all the subject matter as described in claims 1,7, 8, 23, and 27 above.

However, Yamamoto does not disclose the method where comparing each property data item with a predetermined sub-set of data associated as recited in claims 9 and 28.

Ajima et al. teaches an advanced code error detection apparatus and system, where comparing bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45)

One of ordinary skill in the art would have clearly recognized the comparing of each property data item with a predetermined sub-set of data associated (column 6, line 41-45). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Ajima et al., where each property data is compared with data associated with given code bit, in the system of Yamamoto, because such feature can start bit error detection from the desired time point, so reliably detect bit error in bit data including the bit data of a reception code input before the

establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto and Ajima et al. as applies to claims 23,27, and 28, and further in view Bloomfield et al. (US PGPUB 2001/0036322).

Yamamoto and Ajima et al. disclose all the subject matter as described in claims 1,7,8,9,23,27, and 28 above.

However, Yamamoto and Ajima et al. do not disclose the method, where each code bit has an associate attribute, and comparing the property data item with the predetermined sub-set of data associated with the code bit as recited in claims 10 and 29.

Bloomfield et al. teaches an image processing system using an array processor, where each code bit has an associate attribute (paragraph [0053], line 1-3), and comparing the property data item with the predetermined sub-set of data associated with the code bit (paragraph [0045], line 9-12).

One of ordinary skill in the art would have clearly recognized the method, where each code bit has an associated attribute (paragraph [0053], line 3-7), and comparing the property data item with the predetermined sub-set of data associated with the code bit (paragraph [0051], line 8-10). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Bloomfield et al., where each code bit has an associated attribute, in the system of Yamamoto,

because such feature has an advantage of scalability, ease of programming, deterministic high speed processing, high throughput, controllability, and extensibility (paragraph [0023], line 9-11), and each acquisition processing component includes a high performance processor for embedded control to enable standalone and real-time application (paragraph [0021], line 5-7).

15. Claims 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Kraft (US 6,954,549).

(1) Regarding claim 47:

Yamamoto discloses all the subject matter as described in claim 1 above.

However, Yamamoto does not disclose the method for determining data ranges of vector property of a graphic entity in a set of drawing; determining a minimum and a maximum value of the vector property; and assigning data ranges to the vector property on the basis of the maximum and minimum value as recited in claim 47.

Kraft teaches a local digital image property control with marks, where the range of vector property is determined (column 1, line 19-22), the minimum and maximum value of the vector property are determined (column 2, line 16-18), as well as assigning data ranges to the vector property on the basis of the maximum and minimum values (column 26, line 7-8).

One of ordinary skill in the art would have clearly recognized the determining of the data range of a vector property (column 1, line 20-22), and determining the maximum and minimum values for the vector property (column 3, line 22-25), and

assigning data ranges to the vector property based on the maximum and minimum values (column 26, line 5-10). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kraft, where the data range of vector property is determined, in the system of Yamamoto, because such feature enables local changes of the image properties in the image (column 2, line 37-38), as well as the sensitivity to noise and to inessential image details is reduced (column 2, line 12-15).

(2) Regarding claim 48:

Yamamoto discloses all the subject matter as described in claims 1 and 47 above.

However, Yamamoto does not disclose the method, where the data ranges are assigned to achieve an even distribution of the population of vector property values in each range as recited in claim 48.

Kraft teaches a local digital image property control with marks, where the data ranges are assigned to achieve an even distribution of the vector property values in each range (column 23, line 20-27)

One of ordinary skill in the art would have clearly recognized the assigning of the data ranges to achieve an even distribution of vector property value in each range (column 23, line 45-50). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kraft, where the data ranges are assigned to achieve an even distribution, in the system of Yamamoto, because such feature may combine the correction of different image properties, especially the

correction of the brightness with the correction of color saturation. Such combination can be made dependent from the absolute value of an image property (for example, the absolute value of the brightness), as well as from the extent of the correction of one image property (column 23, line 66-67; and column 24, line 1-5).

### *Allowable Subject Matter*

16. Claims 11 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

the prior art of record does not teach or suggest that the list of attributes includes range, numeric and text, and having the associated comparison method of: "within range", "greater than, less than, equal", and "substring".

### *Conclusion*

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amara Abdi
04/13/2007

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